Buck Timber Sale
Logging Feasibility Report

Notes: Due to the variability of the terrain throughout the sale, there may be the need of intermediate support trees in units not so stated in this analysis. Rigging heights are based on a particular profile and will also differ from given heights throughout each unit. Unless otherwise stated skyline yarding direction will be uphill and Ground Base skidding directions will be downhill. Helicopter yarding will be downhill unless otherwise stated. All skidding and yarding operations will have constraints within stream corridors in all units. See contract provision C6.42# for special yarding and skidding methods. All Ground based skid roads and landings must be approved prior to use. Skid roads will be placed 150' apart.

For skyline operations, a carriage with skyline clamping capability will be required. Unless otherwise stated in the unit comments the Diamond D2000, 42' boom, 7/8" skyline, 5/8 inch mainline and 1/2 inch haulback line will be used with an Acme 20 carriage for profile analysis. Skyline corridors for uphill yarding will be 150 feet apart at the farthest reach of the corridor. For downhill yarding the corridors spacing can be adjusted to be closer than 150 feet with prior approval from the Contract Officer Rep.

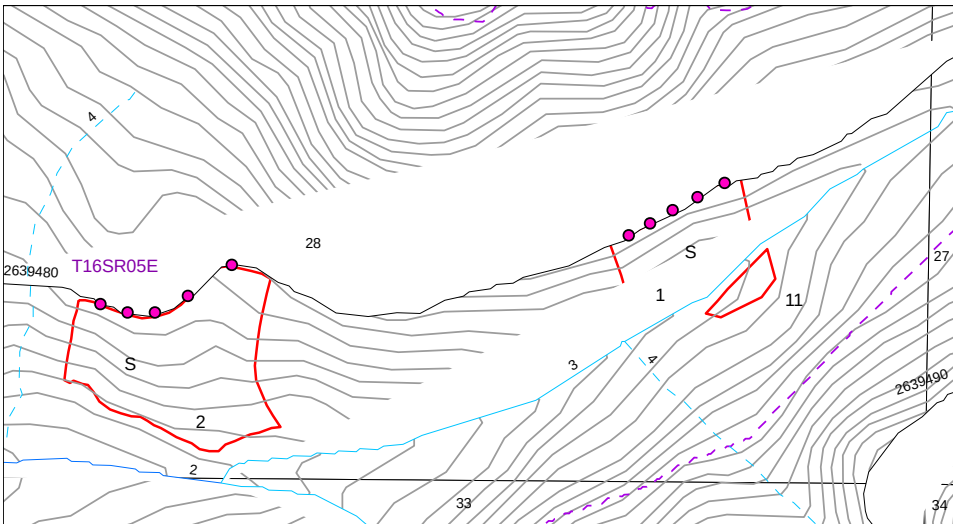
In those areas which are recommended for Ground Base systems, and which have slopes in excess of 30%, shovel operations can be considered. Each situation must be looked at and approved by the TSO with the cooperation of the zone Geologist.

Ground based equipment used for yarding is not permitted within 120 feet of class 1, 2, and 3 streams, as designated in the Sale Area Map. Ground based equipment is not permitted within 50 feet of a class 4 streams, as designated on the Sale Area Map. In the remainder of the riparian reserve, ground based equipment is permitted.

Skyline corridors are permitted within the buffers, however all timber cut in No Harvest Buffers will left in place. Full suspension will be required when yarding over perennial streams. Where full suspension is not obtainable over intermittent streams, partial suspension is required and limited to that period when the stream is dry.

Intermediate support tree and tail spar heights are determined in accordance to OSHA standards and guidelines.

There may be small areas along roads and near landing sites that can be harvested in a manor not specified in the logging plan. With prior approval from the TSO these areas may be harvested using alternate methods operation.

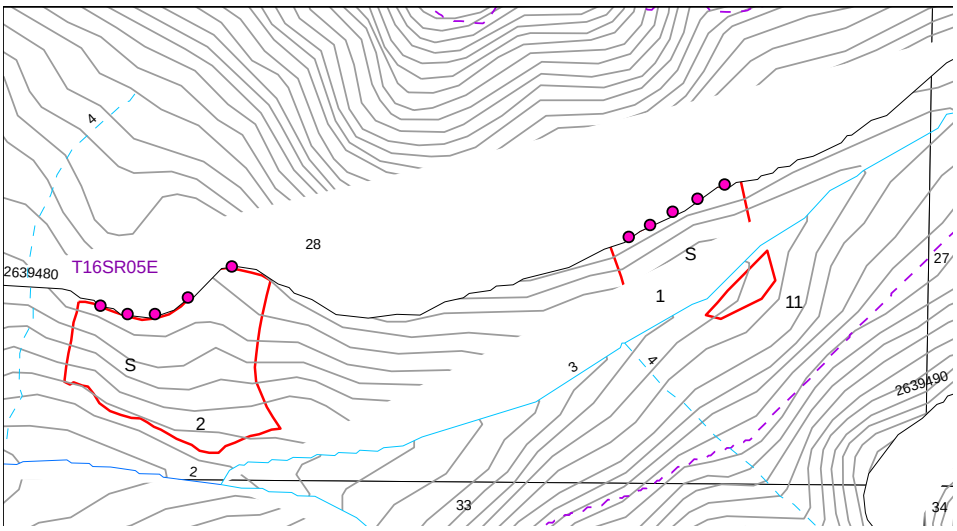


Unit No: 1 Elevation: 2400 %Slope: 10-45

Township: 16S Range: 5E Section: 28

Prescribed System	Acres
S	8

Discussion: The unit will be skyline yarded to the 480 road. The class 3 stream along the south boundary will require full suspension through the corridors. The timber along the south boundary is larger and will provide for adequate suspension for lift through the stream buffer. The average yarding distance is approx. 300’.

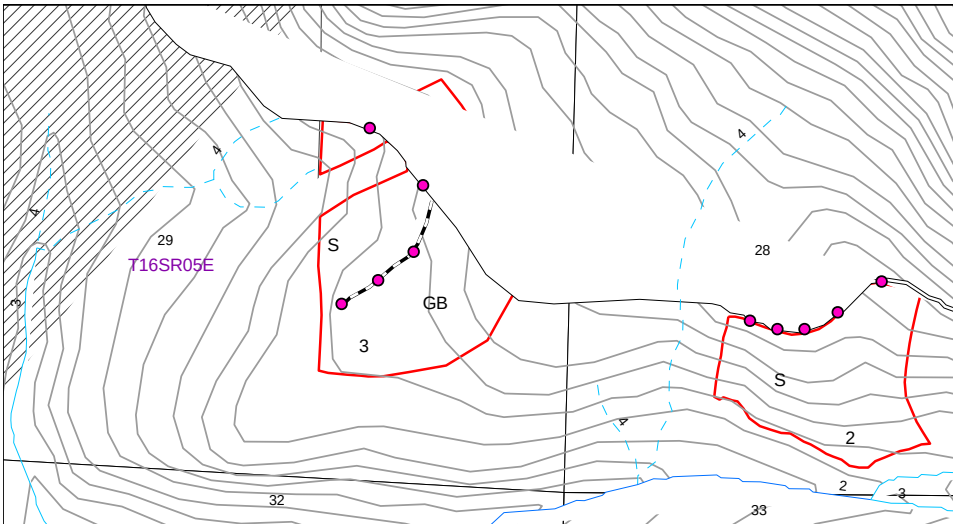


Unit No: 2 Elevation: 2300 %Slope: 10-40

Township: 16S Range: 5E Section: 28

Prescribed System	Acres
S	15

Discussion: Unit will be skyline yarded to the 480 road. Tail spar trees and intermediate supports are good throughout the unit. Average yarding distance is approx. 375'.

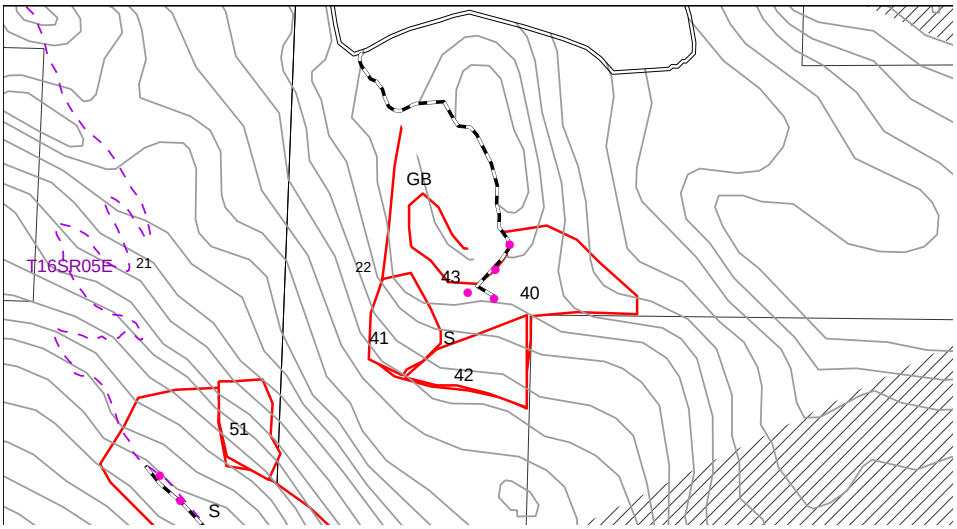


Unit No: 3 Elevation: 2200 %Slope: 10-40

Township: 16S Range: 5E Section: 29

Prescribed System	Acres
S	12
GB	16

Discussion: There is an 800’ temp logging spur into the unit which will access the skyline ground and provide for landing for the ground based area. The average skyline reach is approx. 250’ and ground based skid is approx. 300’.



Unit No: 40 Elevation: 1800 %Slope: 5-45

Township: 16S Range: 5E Section: 22

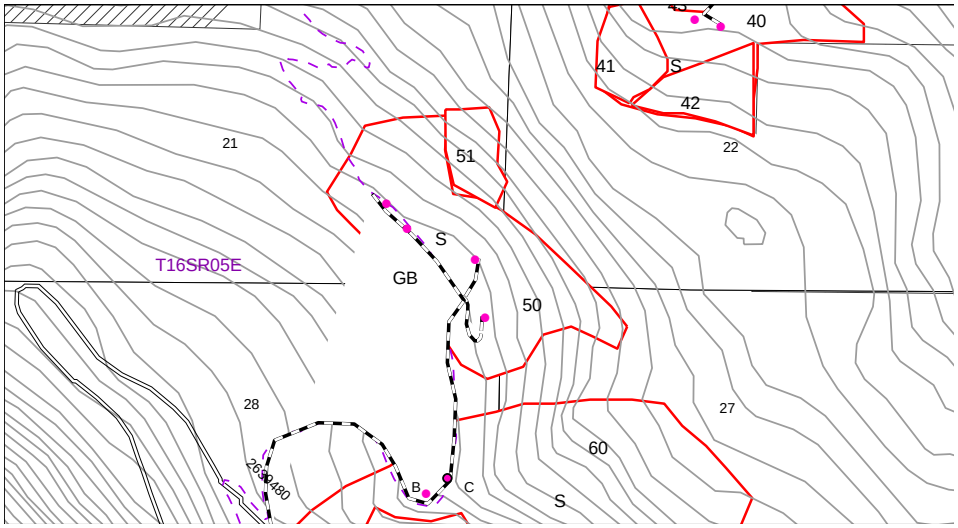
Prescribed System	Acres
S	12
GB	6

Discussion: There is a 1700 foot temporary truck spur into the unit off the 2639-121 road. The spur will access the southern portion of the unit and will allow for downhill yarding. The dashed area to the south of landing 'A' is a benched area. A profile was ran from landing 'A' through this bench to the ridgeline along the southern boundary. A standing skyline configuration would require a tail spar of approx 60' and provide for payloads of 1400 lbs. The width of the bench is approx 300' which will likely require two corridors. The benched area is the extreme portion of the unit.

The required skyline length for this setting is approx 1150 feet. The benched area is designated as a "GAP".

The GB portion of the unit will have a long skid length of approx 600'. The temp truck spur will be the primary road for the GB skidding.

Average skyline yarding distance is approx 350'. Average skidding distance is approx 325'.



Unit No: 50 Elevation: 2400 %Slope: 40-60

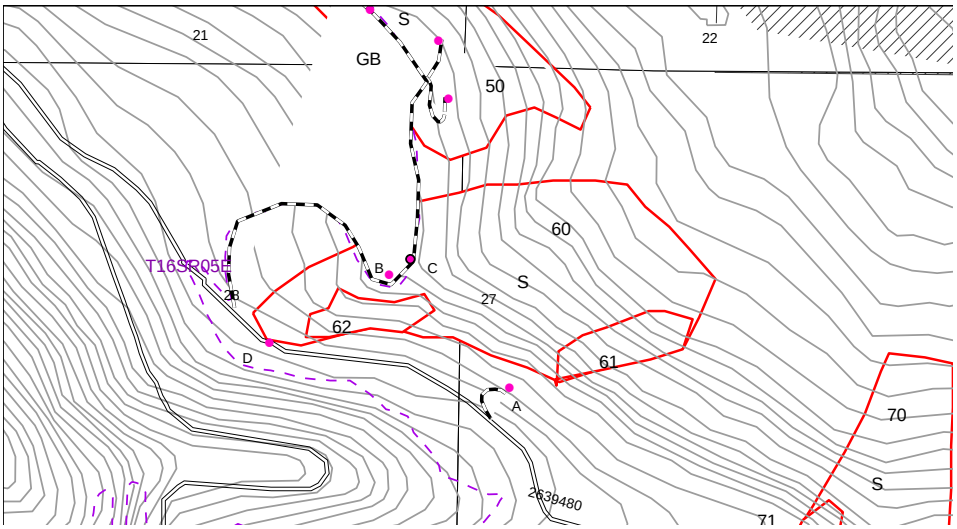
Township:16S Range: 5E Section: 21, 22, 26, 27

Prescribed System	Acres
S	18

Discussion: The unit has 3600 feet of proposed temp truck spurs. Approx 3000 feet is along a portion of the Castle Rock Trail. The trail was converted from a pre-existing road prism. There will be several skyline landings along the main temp spur to the north west. There are additional portions of temp spur which access a grade break along the middle and southern piece of the unit.

The profile for this unit shows the need of an intermediate support tree. The trees throughout the unit and along the boundary to the north east are more than adequate for lift trees. The profile shows a required skyline length of 1060 feet, with a minimum payload of 1960 lbs.

The average yarding distance is approx 400’.



Unit No: 60 Elevation: 2400 %Slope: 40-75

Township:16S Range: 5E Section: 27, 28

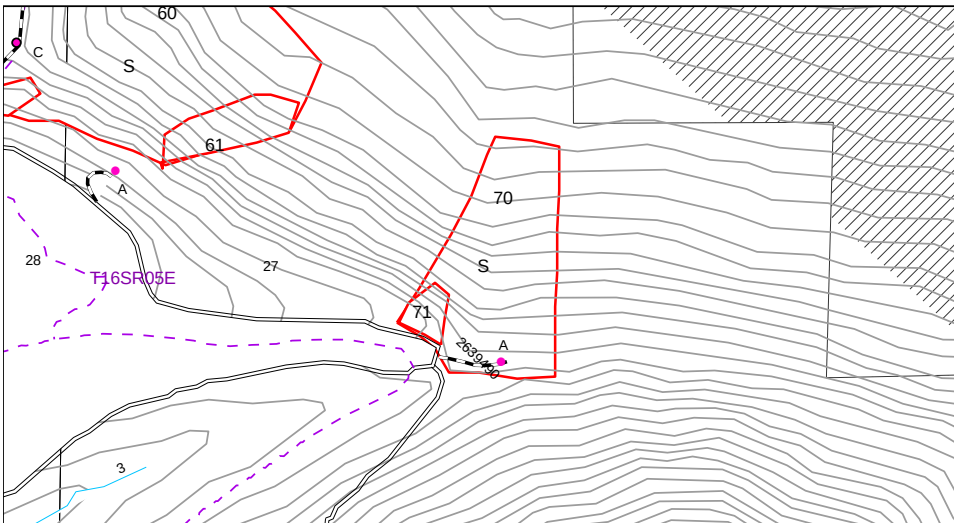
Prescribed System	Acres
S	36

Discussion: There is a proposed 300 foot temporary truck spur into the unit through a stand of mature timber to a landing which will access the eastern portion of the unit. The landing (A) is located in the same mature timber as the temp spur. Skyline corridors will be required through the mature timber (see the cross-hatched are on the map). Any timber felled for the purposes of skyline corridors will be left on site. There is also a "GAP" in the south east corner of the unit. The "GAP" will ease the difficulty of the side hill yarding in this corner of the unit.

There is also a temp spur which swings into the northwest portion of the unit. This piece of temp spur will allow for some downhill yarding which will need to be done in the west side of the unit. Approx 3-4 corridors will be needed,(landings B & C), to remove timber which is not accessible from the 480 road. Landing D will access the piece which comes up to the 480 road.

The profile off landing A shows a standing skyline configuration. The tail holds will be approx 100' outside of the unit boundary on a slight rise to a grade break and will provide for good deflection. Approx 1600 feet of skyline will be required on the longest reach for the unit. The profile shows a minimum payload of 5280 lbs.

Average yarding distance is approx 500'.



Unit No: 70 Elevation: 2400 %Slope: 10-60

Township:16S Range: 5E Section: 27

Prescribed System	Acres
S	15

Discussion: The unit has a proposed 300’ temp spur into the unit off the 480 road. There is approx 3 acres of downhill/side hill yarding in the unit. This area will be a 3 acre “gap” to allow for easier yarding. The profile ran off landing “A” shows a standing skyline configuration. The tail hold trees will be the larger timber outside the boundary approx 50’. Required skyline length of approx 1550’ for this setting, and will be the longest reach for the unit. A minimum payload is 1378 for this profile. The average yarding distance is approx 450’